



# PERINATAL THROMBOSIS AND INHERITED PROTHROMBOTIC DISORDERS



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**Introduction:** Prothrombotic disorders may **be associated with** perinatal stroke (PT) and influence outcome. **An** important inherited disorder is factor V Leiden mutation<sup>1</sup>. PT is an acute neurologic syndrome due to cerebral injury of vascular origin, occurring between 20 weeks gestation and 28 days postnatal life<sup>1,2</sup>. Estimated **yearly** incidence is 35 per 100000 live births<sup>1</sup>.

**Material and methods:** Retrospective study of infants with prothrombotic disorders causing PT born in Hospital Cuf Descobertas between 2003 and 2011.

**Results:** Between 2003 and 2011, 23414 babies were born. PT occurred in 8 newborns. Coagulation disorders, factor V Leiden, have been identified in two cases, 25%.

Total of babies  
2003-2011

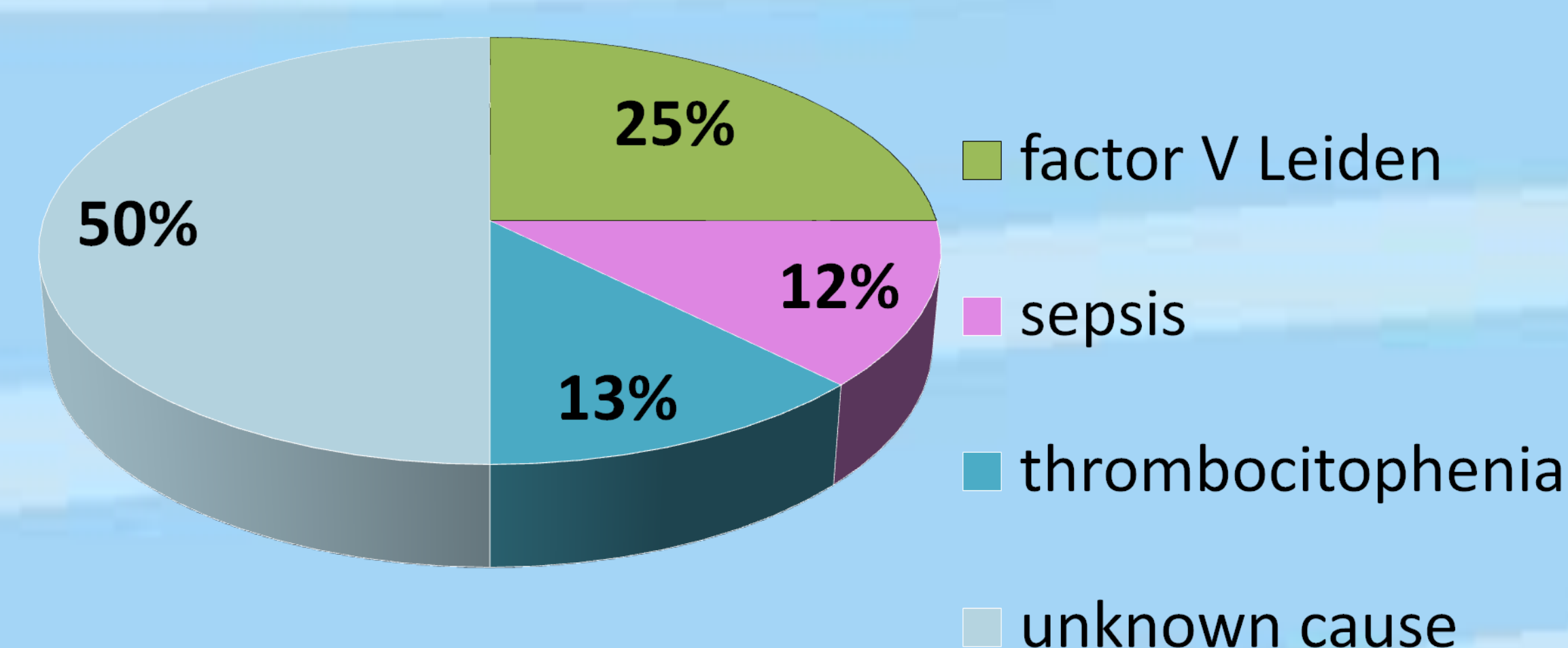
23414

Perinatal stroke

8

Stroke /Timing <sup>3</sup>	Stroke / Type <sup>3</sup>	Development
Neonatal	Ischemic	9 Years - Normal
Late neonatal	Thrombosis	8 Years-Epilepsy, Development delay
Neonatal	Hemorrhagic	2 years –spastic diplegia
Neonatal	Ischemic	2 Years -Normal
Neonatal	Ischemic	20 M - Normal
Neonatal	Hemorrhagic	18 M – Normal

Etiology



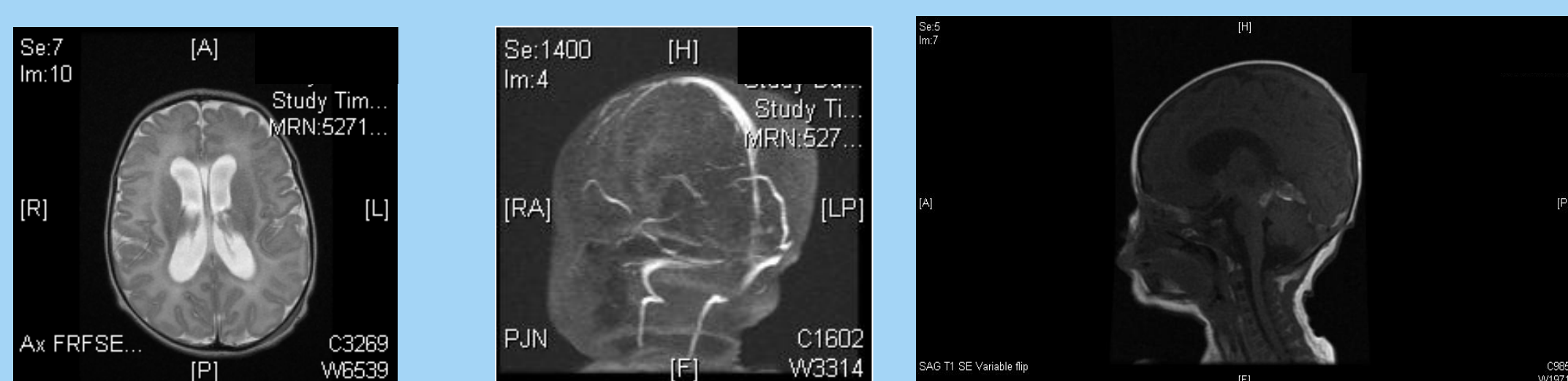
## Review of the cases with Factor V Leiden

### Case 1

#### Thrombosis detected in neonatal period.

- Vacuum delivery at 40 weeks, Newborn female, 3015 g, Apgar index 9-10.
- Started seizures 30 minutes after birth.
- MRI showed cerebral venous thrombosis of great cerebral vein of Galen and cavernous sinus.
- Factor V Leiden was identified.
- The child is presently 3 years old.

Neurodevelopment is normal.



### Case 2

#### Ischemic stroke detected in uterus.

- Elective caesarean was performed at 37 weeks. Newborn male, 3065 g. Apgar index 9-10
- D1 MRI revealed massive infarction of right middle cerebral artery.
- Factor V Leiden was identified.
- The child is now 12 months old, has left hemiparesis and normal cognitive development.

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**Conclusions:** : Our incidence of PT is similar to other series (34 /100.000 live births)<sup>2</sup>. Half of the cases **remain** without diagnosis<sup>1</sup>. Inherited prothrombotic disease were identified in 25%. Since these disorders **represent** risk factors for PT, diagnostic tests should be performed before pregnancy, in **clinically** suspicious cases. Ultrasound was the first image method used. MRI define the type, extent, vascular territory and number of lesions. Long-term follow-up is necessary since neurodevelopment sequelae may be noticeable over time.